

Grinding Drivers

1 Grinding drivers explained

The grinding driver is used on cylindrical grinding machines to transfer the rotation motion of the work head to the part to be ground. The part usually is held in place between centers. The grinding driver replaces the common drive dog. Two types of drivers are offered, the mechanical and the pneumatic type. The mechanical drivers automatically close the jaws through the starting motion of the work head. Normally the jaws open when the work head stops. It is however possible that the jaws do not open on their own. The operator can open the jaws by reversing the turning direction of the work head or by hand, turning the driver a few degrees in the driving direction.

The pneumatic drivers close the jaws with spring action. To open the jaws air pressure is used to overcome the spring pressure. The pneumatic drivers need in addition an air pressure line with minimum 5 bar /73 psi) and a valve. The valve may be controlled by the machine controller or activated by a foot valve.

2 When are Elaso grinding drivers used?

Elaso grinding drivers are used in volume production, especially for fully automatic loading and unloading of parts. Naturally these drivers also offer benefits when manually loading and unloading. Important factors are time used for part change, rejection rate, how many machines an operator has to tend to, ease of use reducing operator fatigue etc.

3 Run-out accuracy

The roundness of a ground part depends on the driver running concentric. Other factors affect the outcome as well: stability of the grinding machine, accuracy of the centers which clamp the part in-between, tailstock pressure, machine characteristics, rpm of work head, vibrations (unbalance of grinding wheel) etc. Therefore an accurate value for a run-out accuracy cannot be furnished. Test run a driver sometimes is required to make sure that it fits the requirements. Often with an appropriate action considerable improvements are realized.

4 Jaws for drivers

The jaws, an important part of the driver, are selected for a defined and limited part diameter range. Jaws may have to be changed to fit another part. Changing the jaws is very simple and does not take much time. Different jaw surfaces are available to accommodate parts: steel hardened, carbide and coated..

